

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): <b>BURROUGHS, B.</b>	Group Art Unit: <b>2629</b>
Application Serial No.: <b>10/646,430</b>	Examiner: <b>PIZIALI, JEFFREY J.</b>
Filed: <b>August 22, 2003</b>	Conf. No.: <b>9170</b>
Title: <b>HAND-HELD ELECTRONIC DEVICE WITH IMPROVED KEYBOARD</b>	

**AMENDMENT AND RESPONSE TO OFFICE ACTION**

MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This communication is submitted in response to the Office Action dated March 7, 2006, in the above-referenced patent application. Please enter and consider the following amendments and remarks.

**Amendments to the Specification** begin on page 2 of this paper;  
**Amendments to the Claims** begin on page 3 of this paper; and  
**Remarks** begin on page 7 of this paper.

**Amendments to the Specification**

Please amend the specification as follows:

Please replace paragraph 10 with the following amended paragraph:

--[10] One or more of the respective arc centers of the left rows 180-200 may be located at the same point, may be collinear, may be collinear and lie in a plane coplanar with the centerline CL, may be collinear and lie in a plane perpendicular to the centerline CL, or may lie at non-collinear points. Similarly, one or more of the respective arc centers of the right rows 210-230 may be concentric, may be collinear, may be collinear and lie in a plane coplanar with the centerline CL, may be collinear and lie in a plane perpendicular to the centerline CL, or may lie at non-collinear points. In the shown embodiment, where rows 180-230 are aligned along respective arcs, arc may have respective radii of curvature between 10 mm and ~~infinity~~ infinity.--

**Amendments to the Claims**

The following listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A keyboard for a handheld electronic device, the keyboard configured for use with thumbs of a user and comprising: a left set of one or more rows of input keys and a right set of one or more rows of input keys separated by a centerline, the left set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the left of the centerline, and the right set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the right of the centerline; and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys.
2. (Original) The keyboard of claim 1, wherein the keyboard has a QWERTY keyboard layout.
3. (Original) The keyboard of claim 1, wherein the keyboard has a DVORAK keyboard layout.
4. (Original) The keyboard of claim 1, wherein the one or more respective arc centers of the left set of one or more rows of input keys are concentric and the one or more respective arc centers of the right set of one or more rows of input keys are concentric.
5. (Original) The keyboard of claim 1, wherein the one or more respective arc centers of the left set of one or more rows of input keys are collinear and the one or more respective arc centers of the right set of one or more rows of input keys are collinear.
6. (Original) The keyboard of claim 1, wherein the one or more respective arc

centers of the left set of one or more rows of input keys are collinear and located in at least one of a vertical line and a horizontal line and the one or more respective arc centers of the right set of one or more rows of input keys are collinear and located in at least one of a vertical line and a horizontal line.

7. (Currently Amended) The keyboard of claim 1, wherein the respective arcs of the left set of one or more rows of input keys and the respective arcs of the right set of one or more rows of input keys include radii of curvature between 10 mm and ~~infinity~~infinity.

8. (Currently Amended) The keyboard of claim 1, wherein the ~~respective angles formed by respective arcs~~ of the left set of one or more rows of input keys and the ~~respective arcs~~ of the right set of one or more rows of input keys form respective angles ~~are between 0 and 90 degrees with respect to the centerline~~.

9. (Currently Amended) The keyboard of claim 1, wherein each row of the one or more rows of each set include a left-most input key and a right-most input key, the left set of one or more rows are opposite the right set of one or more rows, and lines drawn through the left-most input key and the right most input key of opposite rows intersect the centerline to form a ~~generally upwards~~ V shape.

10. (Currently Amended) A keyboard for a handheld electronic device, the keyboard configured for use with thumbs of a user and comprising: a left set of one or more rows of input keys including a left-most input key and a right most input key and a right set of one or more rows of input keys including a left-most input key and a right most input key separated by a centerline, the left set of one or more rows are opposite the right set of one or more rows, and lines drawn through the left-most input key and the right most input key of opposite rows intersect the centerline to form a ~~generally upwards~~ V shape; and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys.

11. (Original) The keyboard of claim 10, wherein the keyboard has a QWERTY

keyboard layout.

12. (Original) The keyboard of claim 10, wherein the keyboard has a DVORAK keyboard layout.

13. (Original) The keyboard of claim 10, wherein the lines drawn through the left-most input key and the right most input key of each row intersect at the centerline to form an angle with respect to the centerline that is between 0 degrees and 90 degrees.

14. (Original) The keyboard of claim 10, wherein the left set of one or more rows of input keys are arranged in one or more respective arcs having one or more respective arc centers located to the left of the centerline, and the right set of one or more rows of input keys are arranged in one or more respective arcs having one or more respective arc centers located to the right of the centerline.

15. (Currently Amended) The keyboard of claim 14, wherein the respective arcs of the left set of one or more rows of input keys and the respective arcs of the right set of one or more rows of input keys include radii of curvature between 10 mm and ~~infinity~~infinity.

16. (Currently Amended) A method of using a keyboard for a handheld electronic device with left and right thumbs of a user, the method comprising: providing a thumb keyboard for a handheld electronic device including a left set of one or more rows of input keys including a left-most input key and a right most input key and a right set of one or more rows of input keys including a left-most input key and a right most input key separated by a centerline, the left set of one or more rows are opposite the right set of one or more rows, and lines drawn through the left-most input key and the right most input key of opposite rows intersect the centerline to form a ~~generally upwards~~ V shape; and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys; using only the left thumb to input information into the handheld electronic device using the left set of one or more rows of input keys; using only the right thumb to input information into the handheld

electronic device using the right set of one or more rows of input keys.

17. (Original) The method of claim 16, wherein the keyboard has at least one of a QWERTY keyboard layout and a DVORAK keyboard layout.

18. (Original) The method of claim 16, wherein the lines drawn through the left-most input key and the right most input key of each row intersect at the centerline to form an angle with respect to the centerline that is between 0 degrees and 90 degrees.

19. (Original) The method of claim 16, wherein the left set of one or more rows of input keys are arranged in one or more respective arcs having one or more respective arc centers located to the left of the centerline, and the right set of one or more rows of input keys are arranged in one or more respective arcs having one or more respective arc centers located to the right of the centerline.

20. (Currently Amended) The method of claim 19, wherein the respective arcs of the left set of one or more rows of input keys and the respective arcs of the right set of one or more rows of input keys include radii of curvature between 10 mm and ~~infinity~~infinity.

**REMARKS**

Applicant would like to thank the Examiner for the courteous telephone interview extended to Mr. Beuerle on Wednesday, May 3, 2006. During the interview, it was agreed that the addition of "and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys" to the independent claims would further distinguish the claimed invention from the applied references, and should put the claimed invention in condition for allowance, pending an updated search.

Claims 1-20 are pending in the present application. Claims 7, 8, 10, 15, 16 and 20 stand objected to. Claims 9-20 stand rejected under 35 U.S.C. 112, second paragraph. Claims 1, 2, 4-11 and 13-20 stand rejected under 35 U.S.C. 102(e). Claims 3 and 12 stand rejected under 35 U.S.C. 103(a). Claims 1, 7-10, 15, 16 and 20 have been amended. Applicant respectfully requests reconsideration and allowance of the above-identified application in view of the above amendments and the following remarks.

**Claim Objections:**

In regard to the claim objections, the relevant claims have been amended accordingly.

**Specification:**

In regard to this objection, the specification has been amended accordingly.

**35 USC §112, Second Paragraph:**

In regard to this rejection, the relevant claims have been amended accordingly.

**35 USC §102(e) Meringer (Claims 1, 2, 4-11 and 13-20)**

Pursuant to the May 3, 2006 interview with the Examiner, it was agreed that the addition of "and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys" to the independent claims would further distinguish the claimed invention from the applied



references, and should put the claimed invention in condition for allowance, pending an updated search.

Meringer does not disclose, teach, or suggest, among other things, a keyboard for a handheld electronic device including a left set of one or more rows of input keys and a right set of one or more rows of input keys separated by a centerline, the left set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the left of the centerline, and the right set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the right of the centerline; and a substantially rectangular numeric keypad for entering phone numbers centered below the left and right sets of one or more rows of input keys.

Therefore, Applicant respectfully requests that the rejection of claims 1, 2, 4-11 and 13-20 be withdrawn.

**35 USC §103(a) Meringer in view of Griffin (Claims 3 and 12)**

Applicant respectfully traverses this rejection for the reasons set forth above with respect to Meringer. Griffin adds nothing in regard to the missing features of Meringer set forth above.

Therefore, Applicant respectfully requests that the rejection of claims 3 and 12 be withdrawn.

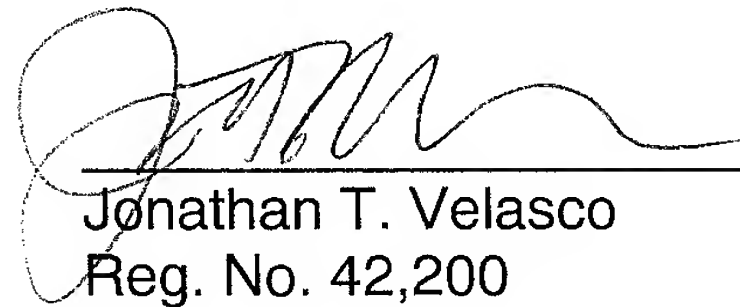


**CONCLUSION**

Applicant believes that by the instant Amendment to the Claims and Specification, all rejections and objections raised by the Examiner have been overcome, and all claims currently pending in the Application are now in a proper condition for allowance. Should the Examiner wish to discuss this amendment in further detail, the Examiner is invited to telephone the undersigned at the number listed below. If necessary, applicant requests, under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application and to charge the fees for a large entity under 37 CFR 1.17(a). The Director is authorized to charge any additional fee(s) or any underpayment of fee(s) or credit any overpayment(s) to Deposit Account No. 50-3001 of Kyocera Wireless Corp.

Respectfully Submitted,

Dated: June 6, 2006

  
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